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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,267	10/20/2004	Georg Kammler	016906-0343	6581
22428	7590	03/16/2006	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			HUSON, MONICA ANNE	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/511,267

Applicant(s)

KAMMLER, GEORG

Examiner

Monica A. Huson

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 102004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 9, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "the relaxation" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Regarding Claims 9 and 10, it is unclear whether the claimed surface temperature is that of the molded article or of the mold itself. For purposes of examination, it will be interpreted that the claimed surface temperature is that of the mold itself.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 7-8, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashimoto et al. (EP 1026198). Regarding Claim 1, Hashimoto et al., hereafter "Hashimoto," show that it is known to carry out a method for producing a heat exchanger box from plastic by

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means of injection molding (Para 0124, 0134; It is noted that an air conditioner is a heat exchanger), characterized in that an agent is added which accelerates the crystallization of the plastic (Para 0115).

Regarding Claim 2, Hashimoto shows the process as claimed as discussed in the rejection of Claim 1 above, including a method characterized in that a crystallization accelerator is added to the plastic (Para 0115).

Regarding Claim 3, Hashimoto shows the process as claimed as discussed in the rejection of Claim 1 above, including a method characterized in that a physical foaming method is used (Para 0121; Addition of the foaming agent is interpreted as the physical foaming method.).

Regarding Claim 7, Hashimoto shows the process as claimed as discussed in the rejection of Claim 1 above, including a method characterized in that the plastic is polypropylene (Para 0115).

Regarding Claim 8, Hashimoto shows the process as claimed as discussed in the rejection of Claim 1 above, including a method characterized in that the plastic is reinforced with glass fibers (Para 0114)(.

Regarding Claim 12, Hashimoto shows that it is known to have a heat exchanger box made from plastic (Para 0124, 0134).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto, in view of Wilson, Jr. (U.S. Patent 5,047,440).

Regarding Claim 4, Hashimoto shows the process as claimed as discussed in the rejection of Claim 3 above, but he does not show a specific chemical blowing agent. Wilson, Jr. show that it is known to carry out a method characterized in that CO₂ is generated as chemical blowing agent (Column 1, line 42; Column 2, lines 50-60). Wilson, Jr. and Hashimoto are combinable because they are concerned with a similar technical field, namely, methods of molding polypropylene compositions. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Wilson, Jr.'s blowing agent during Hashimoto's molding process in order to promote an evenly-foamed article that satisfies end-use specifications.

Regarding Claim 5, Hashimoto shows the process as claimed as discussed in the rejection of Claim 3 above, including a method wherein the plastic is mixed with a filler prior to injection molding (Para 0121, 0122). Hashimoto does not show a specific chemical blowing agent. Wilson, Jr. shows that it is known to carry out a method characterized in that polyethylene-enrobed granules are admixed as chemical blowing agent with the plastic (Column 4, lines 63-68). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Wilson, Jr.'s blowing agent during Hashimoto's molding process in order to promote an evenly-foamed article that satisfies end-use specifications.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto, in view of Houdek et al. (U.S. Patent 4,303,728). Hashimoto shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show accelerated relaxation. Houdek et al., hereafter "Houdek," show that it is known to carry out a method characterized in that the expansion is accelerated (Column 4, lines 65-68). Houdek and Hashimoto are combinable because they are concerned with a similar technical field, namely, methods of injection molding. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Houdek's accelerated expansion concept during Hashimoto's molding method in order to decrease overall cycle time.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto, in view of Allen et al, (U.S. Patent 5,214,088).

Regarding Claim 9, Hashimoto shows the process as claimed as discussed in the rejection of Claim 1 above, including a method of molding a heat exchange box (Para 0124, 0134). Hashimoto does not show a specific mold surface temperature. Allen et al., hereafter "Allen," show that it is known to carry out a method characterized in that the article is molded at a surface temperature of 120C (Column 13, lines 64-67; It is interpreted that the article is also removed at this temperature). Allen and Hashimoto are combinable because they are concerned with a similar technical field, namely, methods of injection molding. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Allen's specific surface temperature during Hashimoto's molding process in order to appropriately process the molding material.

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Regarding Claim 10, Hashimoto shows the process as claimed as discussed in the rejection of Claim 1 above, including a method of molding a heat exchange box (Para 0124, 0134). Hashimoto does not show a specific mold surface temperature. Allen show that it is known to carry out a method characterized in that the article is molded at a surface temperature of 120C (Column 13, lines 64-67; It is interpreted that the article is also removed at this temperature). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Allen's specific surface temperature during Hashimoto's molding process in order to appropriately process the molding material.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto, in view of Applicant's Specification (Background section). Hashimoto shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show using an auxiliary tensioning means. Applicant discloses that it is conventional to carry out a method characterized in that an auxiliary tensioning means is inserted immediately after the heat exchanger box has been removed from the injection mold (Page 1, lines 8-17). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use the conventional tensioning means after Hashimoto's molding process in order to maintain the desired configuration of the molded article while it is still cooling off.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Monica A Huson
March 13, 2006



MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER